

A P P E N D I X I:

CLAIM AMENDMENTS:

Cancel Claims 14, 16 and 19, and amend Claims 1, 15, 18 and 20, as indicated in the following listing of the claims:

1. (*currently amended*) A process for the purification of ionic liquids which are contaminated with a polar, high boiling compound which cannot be removed completely from the ionic liquids by way of a distillation ~~and/or which has a vapor pressure of less than about 10 mbar at room temperature~~, which process comprises providing a mixture comprising the ionic liquids and the polar, high boiling compound, and removing the polar, high boiling compound from the ionic liquids by adsorptive separation.
2. (*original*) A process as claimed in claim 1, wherein the separation is carried out by means of ion exchange.
3. (*original*) A process as claimed in claim 1, wherein the separation is carried out by means of chromatography.
4. (*original*) A process as claimed in claim 3, wherein the separation is carried out by means of a continuous chromatographic process.
5. (*canceled*)
6. (*previously presented*) A process as claimed in claim 1, wherein water, methanol, ethanol, 1-propanol or isopropanol or a mixture thereof is used as solvent.
7. (*previously presented*) A process as claimed in claim 1, wherein reversed phase silica gels, resins, ion exchangers, zeolites, aluminum oxides or activated carbon are used as stationary phases.
8. (*previously presented*) An adsorption separation process for removing an impurity from an ionic liquid contaminated with said impurity, wherein said impurity is a polar, high boiling compound which cannot be removed completely from the ionic liquid by way of a distillation and/or said compound has a vapor pressure of less than about 10 mbar at room temperature, wherein the ionic liquid has an anion and cation, the cation comprising at least one five- or six-membered heterocycle containing at least one phosphorus or nitrogen atom; and

wherein the process comprises a first step of contacting the contaminated ionic liquid with a resin, and a second step of separating the purified ionic liquid from the resin.

9. (*previously presented*) The separation process of claim 8, wherein the resin is at least one of an ion exchange resin and an absorption resin.
10. (*previously presented*) The separation process of claim 8, wherein the separation is carried out by chromatography.
11. (*previously presented*) The separation process of claim 8, further comprising a step of removing low boiling compounds by evaporation.
12. (*previously presented*) The separation process of claim 8, wherein water, methanol, ethanol, 1-propanol, isopropanol or a mixture thereof is used as solvent.
13. (*previously presented*) The separation process of claim 8, wherein the anion is a halide.
14. (*canceled*)
15. (*currently amended*) A process as claimed in claim 1, wherein the polar, high boiling compound ~~cannot be removed completely from the ionic liquids by way of a distillation and said compound~~ has a vapor pressure of less than about 10 mbar at room temperature.
16. (*canceled*)
17. (*previously presented*) A process as claimed in claim 8, wherein the polar, high boiling compound cannot be removed completely from the ionic liquids by way of a distillation and said compound has a vapor pressure of less than about 10 mbar at room temperature.
18. (*currently amended*) An adsorption separation process for removing an impurity from an ionic liquid contaminated with said impurity, wherein said impurity is a polar compound which cannot be removed completely from the ionic liquid by way of a distillation ~~and/or said compound has a vapor pressure of less than about 10 mbar at room temperature,~~
which process comprises
firstly providing the contaminated ionic liquid

- (a) by separating volatile components from a mixture comprising the ionic liquid, said volatile components and the impurities, by means of evaporation or rectification, and/or
- (b) by separating non-polar components from a mixture comprising the ionic liquid, said non-polar components and the impurities, by means of extraction with a non-polar organic solvent,

subsequently contacting the contaminated ionic liquid with a resin, and then separating the purified ionic liquid from the resin.

19. (canceled)

20. (currently amended) A process as claimed in claim 18, wherein the polar compound ~~cannot be removed completely from the ionic liquids by way of a distillation and said compound~~ has a vapor pressure of less than about 10 mbar at room temperature.